

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

Claims 1-26 (canceled)

Claim 27 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;

forming the at least one ~~circumferentially inextensible~~ annular structure; and

applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;

wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and

parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-

shaped conformation about a profile in transverse section of the toroidal support to define:

two side portions~~[[,]] the side portions~~ that substantially

extend~~[[ing]]~~ in planes orthogonal to a geometric axis of

rotation of the toroidal support at mutually-spaced-apart positions in an axial direction[[, and]]; a crown portion ~~extending~~ that extends at a ~~radially-outer~~ radially outer position ~~between the side portions in a plane~~ substantially parallel to the geometric axis of rotation of the toroidal support; and two mutually-axially-spaced-apart transition regions that are defined between the side portions and the crown portion, respectively;

wherein the crown portions of [[each]] the first strip lengths are disposed consecutively in side-by-side relationship along a circumferential extension of the toroidal support, wherein edges of circumferentially consecutive first strip lengths abut evenly along their entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a side portion of at least one ~~circumferentially-consecutive~~ circumferentially consecutive first strip length,

wherein forming the at least one ~~circumferentially-inextensible~~ annular structure comprises depositing at least one first elongated element in ~~substantially-concentric~~ substantially concentric coils to form a first ~~circumferentially-inextensible~~ circumferentially inextensible annular insert, substantially in a form of an annulus[[,]] ~~directly against respective side portions of the first strip lengths, and~~

wherein the respective side portions of the first strip lengths are not turned up around the first ~~circumferentially-inextensible~~ annular insert.

Claim 28 (previously presented): The method of claim 27, wherein the first strip lengths are prepared by cutting actions executed sequentially on at least one continuous strip element incorporating the thread elements in the at least one layer of raw elastomer material.

Claim 29 (previously presented): The method of claim 28, wherein each cutting action is followed by deposition of an individual first strip length thus obtained onto the toroidal support.

Claim 30 (currently amended): The method of claim 27, wherein the side portions of ~~circumferentially-consecutive~~ circumferentially consecutive first strip lengths on the toroidal support converge toward the geometric axis of rotation of the toroidal support.

Claim 31 (currently amended): The method of claim 27, wherein an amount of coverage of the side portions of the first strip lengths progressively decreases, starting from a maximum value at ~~radially-inner~~ radially inner ends of the side portions until a zero value at the transition regions ~~between the side portions and the crown portions~~.

Claim 32 (previously presented): The method of claim 27, wherein the first strip lengths are sequentially deposited onto the toroidal support according to a circumferential distribution pitch corresponding to a width of the first strip lengths.

Claim 33 (previously presented): The method of claim 27, wherein the first strip lengths are sequentially deposited onto the toroidal support according to a circumferential distribution pitch corresponding to a multiple of a width of the first strip lengths.

Claim 34 (previously presented): The method of claim 27, wherein the first strip lengths have a width corresponding to a submultiple of a circumferential extension of the toroidal support, as measured at an equatorial plane of the toroidal support.

Claim 35 (previously presented): The method of claim 27, further comprising:
sequentially pressing the side portions of each first strip length to define regions of increased width close to inner circumferential edges of the carcass structure.

Claim 36 (previously presented): The method of claim 35, wherein the first strip lengths are prepared by cutting actions executed sequentially on at least one continuous strip element incorporating the thread elements in the at least one layer of raw elastomer material, and
wherein sequentially pressing the side portions is carried out on the at least one continuous strip element before execution of corresponding cutting actions.

Claim 37 (previously presented): The method of claim 35, further comprising:
moving the thread elements in the first strip lengths apart from each other concurrently with sequentially pressing the side portions.

Claim 38 (previously presented): The method of claim 27, wherein during depositing the first strip lengths, at least one of the first strip lengths is held on the toroidal support by a suction action produced through the toroidal support.

Claim 39 (previously presented): The method of claim 27, wherein depositing the first strip lengths comprises:

laying down each first strip length transversely and at a centered position relative to an equatorial plane of the toroidal support;

radially moving each first strip length close to the toroidal support so as to form the crown portions of the first strip lengths on the toroidal support;

translating opposite ends of each first strip length substantially radially close to the geometric axis of rotation of the toroidal support for applying the side portions of the first strip lengths to the toroidal support; and

rotating the toroidal support through an angular pitch corresponding to a circumferential distribution pitch of the first strip lengths.

Claim 40 (previously presented): The method of claim 27, further comprising:
pressing the side portions of the first strip lengths against side walls of the toroidal support.

Claim 41 (previously presented): The method of claim 27, further comprising:
forming at least one second carcass ply superposed on the at least one first carcass ply.

Claim 42 (currently amended): The method of claim 41, wherein forming the at least one second carcass ply comprises:

preparing second strip lengths, each second strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material;
and

depositing the second strip lengths onto the toroidal support in a substantially U-shaped conformation about the profile in transverse section of the toroidal support to define two side portions, the side portions substantially extending in planes orthogonal to the geometric axis of rotation of the toroidal support at mutually-spaced-apart positions in the axial direction, and a crown portion extending at a ~~radially-outer~~ radially outer position between the side portions;

wherein the crown portions of each second strip length are disposed consecutively in side-by-side relationship along the circumferential extension of the toroidal support, and

wherein the side portions of each second strip length cover in part or are partly covered by a side portion of at least one ~~circumferentially consecutive~~ circumferentially consecutive second strip length.

Claim 43 (previously presented): The method of claim 27, further comprising:

coating the toroidal support with at least one sealing layer or liner made of an elastomer material impervious to air prior to forming the at least one first carcass ply of the carcass structure.

Claim 44 (previously presented): The method of claim 43, wherein coating the toroidal support is carried out by winding at least one ribbon band of an air-proof elastomer material in coils disposed side-by-side along the profile in transverse section of the toroidal support.

Claim 45 (previously presented): The method of claim 27, further comprising:
disengaging the tire from the toroidal support;
introducing an air tube into the carcass structure; and
vulcanizing the tire.

Claim 46 (previously presented): The method of claim 27, further comprising:
vulcanizing the tire; and
stretching the carcass structure during vulcanizing to achieve an expansion of the tire of a linear amount between 2% and 5%.

Claim 47 (currently amended): The method of claim 27, further comprising:
depositing at least one second elongated element in ~~substantially concentric~~ substantially concentric coils to form a second ~~circumferentially inextensible~~ circumferentially inextensible annular insert substantially in a form of an annulus disposed concentrically in a side-by-side relationship relative to the first annular insert; and
forming at least one filling body of raw elastomer material interposed between the at least one first elongated element and the at least one second elongated element.

Claim 48 (previously presented): The method of claim 47, wherein the at least one first elongated element and the at least one second elongated element are deposited into a molding cavity, and

wherein the at least one filling body is formed in the molding cavity.

Claim 49 (currently amended): The method of claim 47, wherein at least one of the ~~substantially concentric~~ substantially concentric coils is defined by a continuous spiral of one or more elongated elements.

Claim 50 (currently amended): The method of claim 47, wherein at least one of the ~~substantially concentric~~ substantially concentric coils is defined by concentric rings of one or more elongated elements.

Claim 51 (previously presented): The method of claim 48, wherein the at least one filling body is formed in the molding cavity by:

interposing at least one annular element of raw elastomer material of predetermined volume between the first and second annular inserts; and

reducing a volume of the molding cavity to compress and deform the at least one annular element until the at least one annular element, the at least one first elongated element, and the at least one second elongated element fill the molding cavity.

Claim 52 (previously presented): The method of claim 48, wherein the at least one filling body is formed in the molding cavity by injecting raw elastomer material between the first and second annular inserts.

Claim 53 (previously presented): The method of claim 47, wherein each annular structure is interposed between the at least one first carcass ply and a second carcass ply superposed on the at least one first carcass ply.

Claim 54 (previously presented): The method of claim 47, further comprising:
coating one or more of the at least one first and second elongated elements with at least one layer of raw elastomer material;
wherein each coated elongated element is coated prior to depositing the coated elongated element.

Claim 55 (previously presented): The method of claim 48, further comprising:
magnetically retaining at least one of the first and second annular inserts at a predetermined position within the molding cavity.

Claim 56 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:
forming at least one first carcass ply of the carcass structure;

forming the at least one ~~circumferentially inextensible~~ annular structure; and
applying the at least one ~~circumferentially inextensible~~ annular structure to a region close
to inner circumferential edges of the at least one first carcass ply;
wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and
parallel thread elements at least partly coated with at least one layer of raw
elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-
shaped conformation about a profile in transverse section of the toroidal
support to define:

two side portions~~[[,]] the side portions~~ that substantially
extend~~[[ing]]~~ in planes orthogonal to a geometric axis of
rotation of the toroidal support at mutually-spaced-apart
positions in an axial direction~~[[, and]]~~;

a crown portion ~~extending that extends~~ at a ~~radially-outer~~ radially
outer position ~~between the side portions~~ in a plane
substantially parallel to the geometric axis of rotation of the
toroidal support; and

two mutually-axially-spaced-apart transition regions that are
defined between the side portions and the crown portion,
respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in side-by-side relationship along a circumferential extension of the toroidal support,

wherein edges of circumferentially consecutive first strip lengths abut evenly along their entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a side portion of at least one ~~circumferentially consecutive~~ circumferentially consecutive first strip length,

wherein forming the at least one ~~circumferentially inextensible~~ annular structure comprises depositing at least one first elongated element in ~~substantially concentric~~ substantially concentric coils to form a first ~~circumferentially inextensible~~ circumferentially inextensible annular insert, substantially in a form of an annulus,

wherein the side portions of the first strip lengths are not turned up around the first ~~circumferentially inextensible~~ annular insert, and

wherein the carcass structure does not comprise flippers wound about the at least one ~~circumferentially inextensible~~ annular structure.

Claim 57 (previously presented): The method of claim 56, wherein the first strip lengths are prepared by cutting actions executed sequentially on at least one continuous strip element incorporating the thread elements in the at least one layer of raw elastomer material.

Claim 58 (previously presented): The method of claim 57, wherein each cutting action is followed by deposition of an individual first strip length thus obtained onto the toroidal support.

Claim 59 (currently amended): The method of claim 56, wherein the side portions of ~~circumferentially consecutive~~ circumferentially consecutive first strip lengths on the toroidal support converge toward the geometric axis of rotation of the toroidal support.

Claim 60 (currently amended): The method of claim 56, wherein an amount of coverage of the side portions of the first strip lengths progressively decreases, starting from a maximum value at ~~radially inner~~ radially inner ends of the side portions until a zero value at the transition regions ~~between the side portions and the crown portions~~.

Claim 61 (previously presented): The method of claim 56, wherein the first strip lengths are sequentially deposited onto the toroidal support according to a circumferential distribution pitch corresponding to a width of the first strip lengths.


Claim 62 (previously presented): The method of claim 56, wherein the first strip lengths are sequentially deposited onto the toroidal support according to a circumferential distribution pitch corresponding to a multiple of a width of the first strip lengths.

Claim 63 (previously presented): The method of claim 56, wherein the first strip lengths have a width corresponding to a submultiple of a circumferential extension of the toroidal support, as measured at an equatorial plane of the toroidal support.

Claim 64 (previously presented): The method of claim 56, further comprising:

sequentially pressing the side portions of each first strip length to define regions of increased width close to inner circumferential edges of the carcass structure.

Claim 65 (previously presented): The method of claim 64, wherein the first strip lengths are prepared by cutting actions executed sequentially on at least one continuous strip element incorporating the thread elements in the at least one layer of raw elastomer material, and wherein sequentially pressing the side portions is carried out on the at least one continuous strip element before execution of corresponding cutting actions.

Claim 66 (previously presented): The method of claim 64, further comprising: 
moving the thread elements in the first strip lengths apart from each other concurrently with sequentially pressing the side portions.

Claim 67 (previously presented): The method of claim 56, wherein during depositing the first strip lengths, at least one of the first strip lengths is held on the toroidal support by a suction action produced through the toroidal support.

Claim 68 (previously presented): The method of claim 56, wherein depositing the first strip lengths comprises:

laying down each first strip length transversely and at a centered position relative to an equatorial plane of the toroidal support;

radially moving each first strip length close to the toroidal support to form the crown portions of the first strip lengths on the toroidal support;

translating opposite ends of each first strip length substantially radially close to the geometric axis of rotation of the toroidal support for applying the side portions of the first strip lengths to the toroidal support; and

rotating the toroidal support through an angular pitch corresponding to a circumferential distribution pitch of the first strip lengths.

Claim 69 (previously presented): The method of claim 56, further comprising:
pressing the side portions of the first strip lengths against side walls of the toroidal support.

Claim 70 (previously presented): The method of claim 56, further comprising:
forming at least one second carcass ply superposed on the at least one first carcass ply.

Claim 71 (currently amended): The method of claim 70, wherein forming the at least one second carcass ply comprises:

preparing second strip lengths, each second strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material;
and

depositing the second strip lengths onto the toroidal support in a substantially U-shaped conformation about the profile in transverse section of the toroidal support to define two side

portions, the side portions substantially extending in planes orthogonal to the geometric axis of rotation of the toroidal support at mutually-spaced-apart positions in the axial direction, and a crown portion extending at a ~~radially outer~~ radially outer position between the side portions;

wherein the crown portions of each second strip length are disposed consecutively in side-by-side relationship along the circumferential extension of the toroidal support, and

wherein the side portions of each second strip length cover in part or are partly covered by a side portion of at least one ~~circumferentially consecutive~~ circumferentially consecutive second strip length.

Claim 72 (previously presented): The method of claim 56, further comprising:

coating the toroidal support with at least one sealing layer or liner made of an elastomer material impervious to air prior to forming the at least one first carcass ply of the carcass structure.

Claim 73 (previously presented): The method of claim 72, wherein coating the toroidal support is carried out by winding at least one ribbon band of an air-proof elastomer material in coils disposed side-by-side along the profile in transverse section of the toroidal support.

Claim 74 (previously presented): The method of claim 56, further comprising:

disengaging the tire from the toroidal support;

introducing an air tube into the carcass structure; and

vulcanizing the tire.

Claim 75 (previously presented): The method of claim 56, further comprising:
vulcanizing the tire; and
stretching the carcass structure during vulcanizing to achieve an expansion of the tire of a linear amount between 2% and 5%.

Claim 76 (currently amended): The method of claim 56, further comprising:
depositing at least one second elongated element in ~~substantially concentric~~ substantially concentric coils to form a second ~~circumferentially inextensible~~ circumferentially inextensible annular insert substantially in a form of an annulus disposed concentrically in a side-by-side relationship relative to the first annular insert; and
forming at least one filling body of raw elastomer material interposed between the at least one first elongated element and the at least one second elongated element.

Claim 77 (previously presented): The method of claim 76, wherein the at least one first elongated element and the at least one second elongated element are deposited into a molding cavity, and
wherein the at least one filling body is formed in the molding cavity.

Claim 78 (currently amended): The method of claim 76, wherein at least one of the ~~substantially concentric~~ substantially concentric coils is defined by a continuous spiral of one or more elongated elements.

Claim 79 (currently amended): The method of claim 76, wherein at least one of the ~~substantially concentric~~ substantially concentric coils is defined by concentric rings of one or more elongated elements.

Claim 80 (previously presented): The method of claim 77, wherein the at least one filling body is formed in the molding cavity by:

interposing at least one annular element of raw elastomer material of predetermined volume between the first and second annular inserts; and

reducing a volume of the molding cavity to compress and deform the at least one annular element until the at least one annular element, the at least one first elongated element, and the at least one second elongated element fill the molding cavity.

Claim 81 (previously presented): The method of claim 77, wherein the at least one filling body is formed in the molding cavity by injecting raw elastomer material between the first and second annular inserts.

Claim 82 (previously presented): The method of claim 76, wherein each annular structure is interposed between the at least one first carcass ply and a second carcass ply superposed on the at least one first carcass ply.

Claim 83 (previously presented): The method of claim 76, further comprising:

coating one or more of the at least one first and second elongated elements with at least one layer of raw elastomer material;

wherein each coated elongated element is coated prior to depositing the coated elongated element.

Claim 84 (previously presented): The method of claim 77, further comprising:
magnetically retaining at least one of the first and second annular inserts at a predetermined position within the molding cavity.

Claim 85 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;
forming the at least one ~~circumferentially inextensible~~ annular structure; and
applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;

wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-shaped conformation about a profile in transverse section of the toroidal support to define:

two side portions~~[[,]]~~ ~~the side portions~~ that substantially extend~~[[ing]]~~ in planes orthogonal to a geometric axis of rotation of the toroidal support at mutually-spaced-apart positions in an axial direction~~[[, and]]~~;

a crown portion ~~extending that extends~~ at a ~~radially-outer~~ radially outer position ~~between the side portions in a plane~~ substantially parallel to the geometric axis of rotation of the toroidal support; and

two mutually-axially-spaced-apart transition regions that are defined between the side portions and the crown portion, respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in side-by-side relationship along a circumferential extension of the toroidal support,

wherein edges of circumferentially consecutive first strip lengths abut evenly along their entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a side portion of at least one ~~circumferentially-consecutive~~ circumferentially consecutive first strip length,

wherein forming the at least one ~~circumferentially inextensible~~ annular structure comprises depositing at least one first elongated element in ~~substantially concentric~~ substantially concentric coils to form a first ~~circumferentially inextensible~~ circumferentially inextensible annular insert, substantially in a form of an annulus[[,]] ~~directly against respective side portions of the first strip lengths~~, and

wherein the first ~~circumferentially inextensible~~ annular insert comprises a ~~radially-elongated~~ radially elongated cross-sectional profile.

Claim 86 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;
forming the at least one ~~circumferentially inextensible~~ annular structure; and
applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;

wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-shaped conformation about a profile in transverse section of the toroidal support to define;

two side portions~~[[,]]~~ ~~the side portions~~ that substantially

extend~~[[ing]]~~ in planes orthogonal to a geometric axis of
rotation of the toroidal support at mutually-spaced-apart
positions in an axial direction~~[[, and]]~~;

a crown portion ~~extending that extends~~ at a ~~radially-outer~~ radially

outer position between the side portions in a plane

substantially parallel to the geometric axis of rotation of the
toroidal support; and

two mutually-axially-spaced-apart transition regions that are

defined between the side portions and the crown portion,

respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in
side-by-side relationship along a circumferential extension of the toroidal support,

wherein edges of circumferentially consecutive first strip lengths abut evenly along their
entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a
side portion of at least one ~~circumferentially-consecutive~~ circumferentially consecutive first strip
length,

wherein forming the at least one ~~circumferentially inextensible~~ annular structure
comprises depositing at least one first elongated element in ~~substantially-concentric~~ substantially
concentric coils to form a first ~~circumferentially inextensible~~ circumferentially inextensible

annular insert, substantially in a form of an annulus~~[[,]] directly against respective side portions~~
~~of the first strip lengths~~, and

wherein the ~~substantially concentric~~ substantially concentric coils are disposed in mutual side-by-side relationship according to circumferences of increasingly growing diameter about a geometric winding axis of the ~~substantially concentric~~ substantially concentric coils.

Claim 87 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;
forming the at least one ~~circumferentially inextensible~~ annular structure; and
applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;

wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-shaped conformation about a profile in transverse section of the toroidal support to define:

two side portions~~[[,]] the side portions~~ that substantially

extend~~[[ing]]~~ in planes orthogonal to a geometric axis of

rotation of the toroidal support at mutually-spaced-apart
positions in an axial direction[~~[, and]]~~;

a crown portion ~~extending~~ that extends at a ~~radially-outer~~ radially
outer position ~~between the side portions in a plane~~
substantially parallel to the geometric axis of rotation of the
toroidal support; and
two mutually-axially-spaced-apart transition regions that are
defined between the side portions and the crown portion,
respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in
side-by-side relationship along a circumferential extension of the toroidal support,
wherein edges of circumferentially consecutive first strip lengths abut evenly along their
entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a
side portion of at least one ~~circumferentially-consecutive~~ circumferentially consecutive first strip
length,

wherein forming the at least one ~~circumferentially-inextensible~~ annular structure
comprises depositing at least one first elongated element in ~~substantially-concentric~~ substantially
concentric coils to form a first ~~circumferentially-inextensible~~ circumferentially inextensible
annular insert, substantially in a form of an annulus,

wherein the carcass structure does not comprise flippers wound about the at least one
~~circumferentially-inextensible~~ annular structure, and

wherein the first ~~circumferentially inextensible~~ annular insert comprises a ~~radially-elongated~~ radially elongated cross-sectional profile.

Claim 88 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;
forming the at least one ~~circumferentially inextensible~~ annular structure; and
applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;

wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-shaped conformation about a profile in transverse section of the toroidal support to define:

two side portions~~[[,]] the side portions~~ that substantially extend~~[[ing]]~~ in planes orthogonal to a geometric axis of rotation of the toroidal support at mutually-spaced-apart positions in an axial direction~~[[, and]]~~;

a crown portion ~~extending~~ that extends at a ~~radially-outer~~ radially
outer position between the side portions in a plane
substantially parallel to the geometric axis of rotation of the
toroidal support; and
two mutually-axially-spaced-apart transition regions that are
defined between the side portions and the crown portion,
respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in
side-by-side relationship along a circumferential extension of the toroidal support,

wherein edges of circumferentially consecutive first strip lengths abut evenly along their
entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a
side portion of at least one ~~circumferentially-consecutive~~ circumferentially consecutive first strip
length,

wherein forming the at least one ~~circumferentially-inextensible~~ annular structure
comprises depositing at least one first elongated element in ~~substantially-concentric~~ substantially
concentric coils to form a first ~~circumferentially-inextensible~~ circumferentially inextensible
annular insert, substantially in a form of an annulus,

wherein the carcass structure does not comprise flippers wound about the at least one
~~circumferentially-inextensible~~ annular structure, and

wherein the ~~substantially concentric~~ substantially concentric coils are disposed in mutual side-by-side relationship according to circumferences of increasingly growing diameter about a geometric winding axis of the ~~substantially concentric~~ substantially concentric coils.

Claim 89 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;
forming the at least one ~~circumferentially inextensible~~ annular structure; and
applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;
wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-shaped conformation about a profile in transverse section of the toroidal support to define:

two side portions~~[[,]]~~ ~~the side portions~~ that substantially extend~~[[ing]]~~ in planes orthogonal to a geometric axis of rotation of the toroidal support at mutually-spaced-apart positions in an axial direction~~[[, and]]~~;

a crown portion ~~extending that extends~~ at a ~~radially-outer~~ radially
outer position between the side portions in a plane
substantially parallel to the geometric axis of rotation of the
toroidal support; and
two mutually-axially-spaced-apart transition regions that are
defined between the side portions and the crown portion,
respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in
side-by-side relationship along a circumferential extension of the toroidal support,

wherein edges of circumferentially consecutive first strip lengths abut evenly along their
entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a
side portion of at least one ~~circumferentially-consecutive~~ circumferentially consecutive first strip
length,

wherein forming the at least one ~~circumferentially-inextensible~~ annular structure
comprises depositing at least one first elongated element in ~~substantially-concentric~~ substantially
concentric coils to form a first ~~circumferentially-inextensible~~ circumferentially inextensible
annular insert substantially in a form of an annulus,

wherein the side portions of the first strip lengths are not turned up around the first
~~circumferentially-inextensible~~ annular insert, and

wherein the first ~~circumferentially-inextensible~~ annular insert comprises a ~~radially-~~
~~elongated~~ radially elongated cross-sectional profile.

Claim 90 (currently amended): A method of making a tire, the tire comprising a carcass structure and at least one ~~circumferentially inextensible~~ circumferentially inextensible annular structure, comprising:

forming at least one first carcass ply of the carcass structure;

forming the at least one ~~circumferentially inextensible~~ annular structure; and

applying the at least one ~~circumferentially inextensible~~ annular structure to a region close to inner circumferential edges of the at least one first carcass ply;

wherein forming the at least one first carcass ply comprises:

preparing first strip lengths, each first strip length comprising longitudinal and parallel thread elements at least partly coated with at least one layer of raw elastomer material; and

depositing the first strip lengths onto a toroidal support in a substantially U-shaped conformation about a profile in transverse section of the toroidal support to define:

two side portions~~[[,]] the side portions~~ that substantially extend~~[[ing]]~~ in planes orthogonal to a geometric axis of rotation of the toroidal support at mutually-spaced-apart positions in an axial direction~~[[, and]]~~;

a crown portion ~~extending~~ that extends at a ~~radially-outer~~ radially outer position ~~between the side portions~~ in a plane substantially parallel to the geometric axis of rotation of the toroidal support; and

two mutually-axially-spaced-apart transition regions that are

defined between the side portions and the crown portion,

respectively;

wherein the crown portions of ~~[[each]]~~ the first strip lengths are disposed consecutively in side-by-side relationship along a circumferential extension of the toroidal support,

wherein edges of circumferentially consecutive first strip lengths abut evenly along their entire crown portions extending between the transition regions,

wherein the side portions of each first strip length cover in part or are partly covered by a side portion of at least one ~~circumferentially consecutive~~ circumferentially consecutive first strip length,

wherein forming the at least one ~~circumferentially inextensible~~ annular structure comprises depositing at least one first elongated element in ~~substantially concentric~~ substantially concentric coils to form a first ~~circumferentially inextensible~~ circumferentially inextensible annular insert substantially in a form of an annulus,

wherein the side portions of the first strip lengths are not turned up around the first ~~circumferentially inextensible~~ annular insert, and

wherein the ~~substantially concentric~~ substantially concentric coils are disposed in mutual side-by-side relationship according to circumferences of increasingly growing diameter about a geometric winding axis of the ~~substantially concentric~~ substantially concentric coils.